

COST ESTIMATES AND FUNDING SOURCES

Attachment H provides information on cost estimates and funding sources for Circulation Element roads. A cost comparison is provided for build-out of the Existing Circulation Element and the Proposed Road Network for GP2020. An estimate is also provided for additional funds build-out of the Board Network Map, an alternative for GP2020. All build-out costs are based on the Existing / CIP road network, which includes the existing road network for the year 2000 plus road improvements contained in the County's 2005 Capital Improvement Plan (CIP).

Attachment H also contains cost estimates for unfunded Caltrans road improvements imbedded in the Proposed Road Network (and Board Network Map) for GP2020. Unfunded road improvements are not currently programmed in the SANDAG 2030 Regional Transportation Plan. Different types of unfunded Caltrans improvements were defined in Attachment G.

ROADWAY NETWORK COST ASSUMPTIONS

Comparative Costs

For comparison purposes, general cost estimates were prepared for each land use scenario based upon the roadway network required to accommodate forecast travel demands. General cost-per-lane-mile factors were assumed for each type of roadway: County Road, State Route and State Freeway. The cost-per-lane-mile factors were based upon estimates made in SANDAG's Regional Transportation Plan and recent costs incurred for County road improvement projects. Actual costs for specific improvements could vary significantly based upon a more detailed assessment of the right-of-way requirements, relocation and/or land acquisition costs, topography, and environmental conditions.

The County's revised roadway standards provide for three possible median improvement types – a raised median, continuous-left-turn lane, and an intermittent turn lane. A single, generalized median-mile cost of \$300,000 per median mile was utilized for the purposes of this assessment.

The cost per lane-mile and per median-mile assumptions are summarized in the Table below:

Roadway Type	Estimated Cost per Mile
County Circulation Element Roads	\$5.0 million
State Routes	\$10.0 million
State Freeways	\$15.0 million
Median Improvements (raised median, continuous-left-turn lane, or intermittent left-turn lane)	\$0.3 million

Cost estimates do not include intermittent turn lanes or passing lane improvements. Tables H-1, H-2 and H-3 present comparative costs to construct each of the proposed future roadway

networks assuming the Existing + CIP network as a starting point. Overall costs were calculated by Community Planning and Sponsor Group areas in terms of lane-miles and median-miles required in addition to that currently provided by the Existing + CIP roadway network. Table H-1 displays costs to complete the existing Circulation Element network, while Tables H-2 and H-3 displays costs to complete the Proposed Road Network and the Board Proposed Network, respectively.

Tables H-4 and H-5 compare costs to complete the existing Circulation Element network with costs to complete the Proposed Road Network (H-4) and the Board Proposed Network (H-5). Table H-6 presents cost estimate information for the unfunded Caltrans improvements.

COUNTY ROAD CAPITAL IMPROVEMENT FUNDING

The Department of Public Works project management team is responsible for overall management and coordination of planning, budget, design, environmental clearance and permitting, right-of-way acquisition and utility coordination for County roads. Funds are approved by the Board of Supervisors via a yearly Detailed Work Program. The Detailed Work Program budget for fiscal year 2005-06 was \$36.8 million. In Fiscal Year 2005-06, 20 projects were in construction with about 60 other projects in the development stages. The Capital Improvement Program adopted budget for fiscal year 2006-07 is \$43 million.

Funding for the Capital Improvement Program comes from a variety of sources including:

- ***Statewide Gasoline sales tax from motor fuels:*** “Gas Tax” is the primary source of funds for the overall County road maintenance and improvement program. The State of California collects a few cents of Gasoline Tax for every gallon of gasoline sold in the State. This money is then distributed to California counties using a formula based on each county's number of registered vehicles. This money becomes a special revenue fund called the Road Fund. This fund must be used for road and transportation purposes.
- ***TransNet:*** This local, ½ cent gasoline sales tax was approved by San Diego County voters in 1987 for 20 years and extended by the voters in November 2004 (Prop A) for another 40 years. TransNet is dedicated to specific road improvement projects approved by the San Diego Association of Governments (SANDAG) which is designated as the regional planning authority.
- ***Traffic Congestion Relief Fund (TCRF or Prop 42):*** State funds provided through SANDAG to cities and counties for street or road maintenance or reconstruction. Funds must be used for street or road maintenance or reconstruction (or storm damage repair. Cities and counties are required to maintain their existing commitment of general funds for street or road work in order to remain eligible for allocation of the specified funds.
- ***Transportation Impact Fee (TIF):*** This new County ordinance will enable implementation of the County’s Transportation Impact Fee programs for the purpose of assessing and collecting fees from future development to offset the costs of constructing planned transportation facilities necessary to accommodate increased traffic generated by future development consistent with §§ 66000 et seq. of the California Government Code

(Mitigation Fee Act). This ordinance applies to development for residential, commercial and industrial land uses, and any others associated with the generation of traffic. The fees collected are to fund identified transportation facilities, or portions thereof, that will provide increased road capacity necessitated by the cumulative impacts of future development. The transportation facilities for which these fees are collected are identified as “TIF Facilities”

- ***Federal Highway Administration funds (FHWA)***: Provide funding for specific roads and bridges in eligible communities.
- ***Federal Highway Bridge Program (HBBR and HBP)***: Federal funds provided through CALTRANS to replace or rehabilitate County bridges.
- ***Federal Community Development Block Grants***: Provides funds to small cities and counties for community development and economic development activities.
- ***Federal Emergency Management Authority (FEMA)***: grants are used to make needed repairs after damage by storms or disasters.
- ***Special Districts***: The Department of Public Works administers the operation of 85 districts, which provide street lighting, fire protection, landscape, and road maintenance services, and manages one Countywide Lighting Maintenance District. Districts are created when residents of an area desire a level of service beyond what the county normally provides. Property owners define the desired level of service, and then assess themselves to pay for the services. DPW has a Special Districts section that manages these districts and administers their budgets. Local flood control district drainage fees provide funds for improvements to new and existing drainage structures affecting the county road infrastructure.
- ***Developer Fees***: Funds provided to the County directly by private land developers to mitigate impacts as a condition of obtaining new subdivision permits within the County.
- ***Other Grants***: Numerous other sources of grants are used to partially fund road improvement projects. A partial list of some of the more commonly used include:

Safe Routes to School (SR2S): Department of Transportation funds administered through CALTRANS provided to improve the health of kids and the community by making walking and bicycling to school safer, easier and more enjoyable. They accomplish this by construction of bicycle and pedestrian safety and traffic calming projects that provide a safe route for children to utilize. (SB 1087 extended the program through January 1, 2008).

The Hazard Elimination Safety Program (HES): A federal safety program that provides funds for safety improvements on all public roads and highways. These funds serve to eliminate or reduce the number and/or severity of traffic accidents at locations selected for improvement.

Indian Gaming Special Distribution Funds (IGSDF): Created for local government agencies impacted by tribal gaming these funds are used to supplement road improvement projects to mitigate traffic impacts in the vicinity of Native American casinos and gaming establishments.

- ***Transportation Development Act (TDA):*** This State revenue is used to build bike lanes, build and operate transit centers and supplement fare box revenues for the County Transit System. These funds are for the development and support of public transportation needs that exist in California and are allocated to areas of each county based on population, taxable sales and transit performance.

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H-7: Un-programmed RTP Improvements to Caltrans Facilities

Table H-1: Existing General Plan CE Network (Lane Miles and Costs)

Community	State Routes		County Roads		Lane Miles	Cost (\$m)
	Lane Miles	Cost (\$m)	Lane Miles	Cost (\$m)		
North County						
Bonsall	8.7	\$87.10	45.9	\$184.47	54.6	\$271.57
Fallbrook	14.9	\$124.06	59.3	\$222.95	74.2	\$347.01
North County Metro	11.5	\$73.19	176.9	\$705.96	188.4	\$779.15
Pala-Pauma	72.4	\$489.74	25.7	\$109.78	98.0	\$599.52
Pendleton-DeLuz	0.0	\$0.00	74.2	\$348.01	74.2	\$348.01
Rainbow	0.0	\$0.00	9.5	\$32.60	9.5	\$32.60
San Dieguito	0.0	\$0.00	55.7	\$219.32	55.7	\$219.32
Valley Center	0.0	\$0.00	105.8	\$441.08	105.8	\$441.08
Subtotal	107.5	\$774.09	553.0	\$2,264.18	660.5	\$3,038.27
East County						
Alpine	0.0	\$0.00	68.1	\$254.73	68.1	\$254.73
Barona	0.0	\$0.00	0.0	\$0.00	0.0	\$0.00
County Islands	0.0	\$0.00	2.1	\$6.52	2.1	\$6.52
Crest/Dehesa	0.0	\$0.00	47.7	\$183.41	47.7	\$183.41
Jamul/Dulzura	56.0	\$456.80	126.0	\$499.04	182.0	\$955.84
Lakeside	2.1	\$9.18	74.5	\$283.20	76.6	\$292.38
Otay	0.0	\$0.00	85.9	\$423.72	85.9	\$423.72
Ramona	13.6	\$77.89	115.9	\$489.22	129.5	\$567.12
Spring Valley	0.0	\$0.00	22.5	\$79.31	22.5	\$79.31
Sweetwater	0.0	\$0.00	26.4	\$101.45	26.4	\$101.45
Valle de Oro	47.1	\$466.64	31.5	\$113.22	78.6	\$579.86
Subtotal	118.8	\$1,010.50	600.6	\$2,433.82	719.4	\$3,444.32
Backcountry						
Central Mountain	7.7	\$50.72	68.5	\$268.37	76.2	\$319.09
Desert - Borrego	48.2	\$481.80	176.2	\$734.96	224.4	\$1,216.76
Julian	0.0	\$0.00	0.7	\$3.50	0.7	\$3.50
Mountain Empire	86.8	\$772.07	121.8	\$473.27	208.6	\$1,245.34
North Mountain	101.7	\$839.20	128.2	\$518.79	229.9	\$1,358.00
Subtotal	244.4	\$2,143.80	495.3	\$1,998.90	739.8	\$4,142.69
TOTALS	470.7	\$3,928.39	1648.9	\$6,696.89	2119.7	\$10,625.28

Note: This cost estimate only includes State highways and County roads. It does not include Freeways.

Table H-2: Proposed Road Network (Lane Miles and Costs)

Community	State Routes		County Roads		Lane Miles	Cost (\$m)
	Lane Miles	Cost (\$m)	Lane Miles	Cost (\$m)		
North County						
Bonsall	7.0	\$69.71	44.5	\$145.32	51.5	\$215.04
Fallbrook	6.4	\$39.09	78.0	\$266.84	84.3	\$305.93
North County Metro	7.3	\$44.88	75.0	\$274.92	82.3	\$319.80
Pala-Pauma	9.8	\$63.24	4.2	\$16.67	14.0	\$79.90
Pendleton-DeLuz	0.0	\$0.00	0.6	\$2.80	0.6	\$2.80
Rainbow	0.0	\$0.00	4.3	\$12.01	4.3	\$12.01
San Dieguito	0.0	\$0.00	35.1	\$100.48	35.1	\$100.48
Valley Center	0.0	\$0.00	74.3	\$282.66	74.3	\$282.66
Subtotal	30.5	\$216.92	315.8	\$1,101.70	346.2	\$1,318.62
East County						
Alpine	0.0	\$0.00	43.2	\$152.26	43.2	\$152.26
Barona	0.0	\$0.00	2.3	\$11.44	2.3	\$11.44
County Islands	0.0	\$0.00	0.5	\$0.14	0.5	\$0.14
Crest/Dehesa	0.0	\$0.00	27.1	\$108.16	27.1	\$108.16
Jamul/Dulzura	17.4	\$142.43	29.5	\$94.67	46.8	\$237.10
Lakeside	8.8	\$82.68	63.0	\$215.92	71.8	\$298.60
Otay	0.0	\$0.00	47.0	\$215.00	47.0	\$215.00
Ramona	14.1	\$66.30	33.7	\$144.99	47.7	\$211.29
Spring Valley	0.0	\$0.00	13.3	\$39.43	13.3	\$39.43
Sweetwater	0.0	\$0.00	9.2	\$23.43	9.2	\$23.43
Valle de Oro	6.3	\$61.20	30.3	\$106.05	36.6	\$167.25
Subtotal	46.6	\$352.60	297.2	\$1,111.49	345.5	\$1,464.09
Backcountry						
Central Mountain	2.9	\$26.87	8.3	\$35.23	11.1	\$62.10
Desert - Borrego	2.8	\$28.06	29.4	\$141.09	32.2	\$169.15
Julian	0.0	\$0.00	2.6	\$13.14	2.6	\$13.14
Mountain Empire	12.4	\$124.47	20.0	\$36.14	32.4	\$160.61
North Mountain	6.9	\$44.02	1.5	\$7.66	8.5	\$51.68
Subtotal	25.0	\$223.41	61.8	\$233.26	86.8	\$456.68
TOTALS	102.1	\$792.93	676.4	\$2,446.45	778.5	\$3,239.38

Note: This cost estimate only includes State highways and County roads. It does not include Freeways.

Table H-3: Board Map Network (Lane Miles and Costs)

Community	State Routes		County Roads		Lane Miles	Cost (\$m)
	Lane Miles	Cost (\$m)	Lane Miles	Cost (\$m)		
North County						
Bonsall	7.0	\$69.71	44.5	\$145.32	51.5	\$215.04
Fallbrook	6.4	\$39.09	80.3	\$272.95	86.6	\$312.03
North County Metro	7.3	\$44.88	63.4	\$221.75	70.7	\$266.62
Pala-Pauma	9.8	\$63.24	4.2	\$16.67	14.0	\$79.90
Pendleton-DeLuz	0.0	\$0.00	0.6	\$2.80	0.6	\$2.80
Rainbow	0.0	\$0.00	15.8	\$42.47	15.8	\$42.47
San Dieguito	0.0	\$0.00	35.1	\$100.48	35.1	\$100.48
Valley Center	0.0	\$0.00	80.2	\$294.40	80.2	\$294.40
Subtotal	30.5	\$216.92	323.9	\$1,096.84	354.4	\$1,313.75
East County						
Alpine	0.0	\$0.00	43.9	\$155.91	43.9	\$155.91
Barona	0.0	\$0.00	2.3	\$11.44	2.3	\$11.44
County Islands	0.0	\$0.00	0.5	\$0.14	0.5	\$0.14
Crest/Dehesa	0.0	\$0.00	27.1	\$108.16	27.1	\$108.16
Jamul/Dulzura	74.6	\$436.95	29.5	\$94.67	104.0	\$531.62
Lakeside	8.8	\$82.68	62.0	\$212.88	70.8	\$295.56
Otay	0.0	\$0.00	47.0	\$215.00	47.0	\$215.00
Ramona	14.1	\$66.30	33.7	\$144.99	47.7	\$211.29
Spring Valley	0.0	\$0.00	13.3	\$39.43	13.3	\$39.43
Sweetwater	0.0	\$0.00	9.2	\$23.43	9.2	\$23.43
Valle de Oro	6.3	\$61.20	30.3	\$106.05	36.6	\$167.25
Subtotal	103.8	\$647.12	298.6	\$1,112.11	402.4	\$1,759.23
Backcountry						
Central Mountain	2.9	\$26.87	8.3	\$35.23	11.1	\$62.10
Desert - Borrego	2.8	\$28.06	29.4	\$141.09	32.2	\$169.15
Julian	0.0	\$0.00	2.6	\$13.14	2.6	\$13.14
Mountain Empire	44.5	\$320.91	20.0	\$36.14	64.4	\$357.05
North Mountain	6.9	\$44.02	1.5	\$7.66	8.5	\$51.68
Subtotal	57.0	\$419.85	61.8	\$233.26	118.8	\$653.12
TOTALS	191.3	\$1,283.89	687.1	\$2,455.96	878.4	\$3,739.85

Note: This cost estimate only includes State highways and County roads. It does not include Freeways.

Table H-4: Cost Differences – Existing CE Network vs. Proposed Road Network (\$m)

Community	State Routes	County Roads	TOTAL (existing-proposed)
North County			
Bonsall	\$17.39	\$39.15	\$56.54
Fallbrook	\$84.98	-\$43.89	\$41.09
North County Metro	\$28.31	\$431.04	\$459.36
Pala-Pauma	\$426.50	\$93.12	\$519.62
Pendleton-DeLuz	\$0.00	\$345.21	\$345.21
Rainbow	\$0.00	\$20.59	\$20.59
San Dieguito	\$0.00	\$118.84	\$118.84
Valley Center	\$0.00	\$158.42	\$158.42
Subtotal	\$557.18	\$1,162.48	\$1,719.66
East County			
Alpine	\$0.00	\$102.47	\$102.47
Barona	\$0.00	-\$11.44	-\$11.44
County Islands	\$0.00	\$6.37	\$6.37
Crest/Dehesa	\$0.00	\$75.25	\$75.25
Jamul/Dulzura	\$314.37	\$404.37	\$718.74
Lakeside	-\$73.50	\$67.28	-\$6.22
Otay	\$0.00	\$208.72	\$208.72
Ramona	\$11.60	\$344.23	\$355.83
Spring Valley	\$0.00	\$39.88	\$39.88
Sweetwater	\$0.00	\$78.02	\$78.02
Valle de Oro	\$405.44	\$7.17	\$412.61
Subtotal	\$657.90	\$1,322.33	\$1,980.23
Backcountry			
Central Mountain	\$23.86	\$233.14	\$256.99
Desert - Borrego	\$453.74	\$593.87	\$1,047.61
Julian	\$0.00	-\$9.64	-\$9.64
Mountain Empire	\$647.61	\$437.13	\$1,084.74
North Mountain	\$795.19	\$511.13	\$1,306.32
Subtotal	\$1,920.38	\$1,765.63	\$3,686.02
TOTALS	\$3,135.46	\$4,250.44	\$7,385.90

Note: This cost estimate only includes State highways and County roads. It does not include Freeways.

Table H-5: Cost Differences – Existing CE Network vs. Board Map Network (\$m)

Community	State Routes	County Roads	TOTAL (existing-proposed)
North County			
Bonsall	\$17.39	\$39.15	\$56.54
Fallbrook	\$84.98	-\$50.00	\$34.98
North County Metro	\$28.31	\$484.21	\$512.53
Pala-Pauma	\$426.50	\$93.12	\$519.62
Pendleton-DeLuz	\$0.00	\$345.21	\$345.21
Rainbow	\$0.00	-\$9.87	-\$9.87
San Dieguito	\$0.00	\$118.84	\$118.84
Valley Center	\$0.00	\$146.67	\$146.67
Subtotal	\$557.18	\$1,167.34	\$1,724.52
East County			
Alpine	\$0.00	\$98.82	\$98.82
Barona	\$0.00	-\$11.44	-\$11.44
County Islands	\$0.00	\$6.37	\$6.37
Crest/Dehesa	\$0.00	\$75.24	\$75.24
Jamul/Dulzura	\$19.85	\$404.37	\$424.22
Lakeside	-\$73.50	\$70.31	-\$3.19
Otay	\$0.00	\$208.72	\$208.72
Ramona	\$11.60	\$344.23	\$355.83
Spring Valley	\$0.00	\$39.88	\$39.88
Sweetwater	\$0.00	\$78.02	\$78.02
Valle de Oro	\$405.44	\$7.17	\$412.61
Subtotal	\$363.38	\$1,321.71	\$1,685.09
Backcountry			
Central Mountain	\$23.86	\$233.14	\$256.99
Desert - Borrego	\$453.74	\$593.87	\$1,047.61
Julian	\$0.00	-\$9.64	-\$9.64
Mountain Empire	\$451.17	\$437.13	\$888.30
North Mountain	\$795.19	\$511.13	\$1,306.32
Subtotal	\$1,723.94	\$1,765.63	\$3,489.58
TOTALS	\$2,644.51	\$4,240.93	\$6,885.44

Note: This cost estimate only includes State highways and County roads. It does not include Freeways.

UNPROGRAMMED CALTRANS ROAD IMPROVEMENTS

Additional lanes on Interstate-15 from Riverside County to SR-78, not identified in the Regional Transportation Plan, were assumed in the forecast model. This assumption was needed to help alleviate congestion on North County roads and is consistent with planned Interstate-15 improvements south of SR-78 and north in Riverside County. These costs were not captured in the lane-mile/median-mile cost assessment (Table H-1 to H-5) but are estimated below.

Table H-6: Unfunded Improvements to Interstate-15

Community	Estimated Cost per Lane Mile	Number of Additional Lanes	Total Lane Miles	Estimated Cost
North County Metro	\$15 million	4 lanes	4.98	\$299 million
Bonsall	\$15 million	4 lanes	6.22	\$373 million
Fallbrook	\$15 million	4 lanes	5.95	\$357 million
Rainbow	\$15 million	4 lanes	3.07	\$184 million
Total			20.22	\$1.2 billion

Additional improvements were identified to Caltrans facilities for the Proposed Road Network and the Board Proposed Network. These improvements are presented below. These costs were not captured in the lane-mile/median-mile cost assessment (Table H-1 to H-5).

Table H-7: Unfunded Improvements to Caltrans facilities (interchanges and overpasses)

Community	Improvement	Location	Estimated Cost
Alpine	Construct New Full Diamond Interchange	I-8 @ Willow Road	\$32 million ¹
	Widen Overpass (2 lanes to 4 lanes)	I-8 @ Tavern Road	\$15 million ²
Lakeside	Improve Half Diamond Interchange to Full Diamond Interchange	SR-67 @ Winter Gardens Boulevard	\$24 million ³
Otay	Construct New Full Diamond Interchange	SR-11 @ Enrico Fermi Drive	\$32 million
	Construct New Full Diamond Interchange	SR-11 @ Siempre Viva Road	\$32 million
Valle de Oro	Construct New Full Diamond Interchange	SR-94 @ Jamacha Boulevard	\$32 million
	Construct New Full Diamond Interchange	SR-94 @ Jamacha Road	\$32 million
Total			\$199 million

Notes:

1. The cost estimate for a new, full diamond interchange was developed from costs associated with recently constructed or renovated interchanges in the County of San Diego, including Las Posas Rd @ SR-78 (\$23.5 million), Siempre Viva Rd @ SR-905 (\$25 million), and Genesee Avenue @ I-5 (\$27.4 million). These three costs were averaged and then the average was increased by 25% to arrive at \$32 million.
2. Estimate based upon discussion with Caltrans planners.
3. The cost of a half diamond interchange was estimated as being 75% of the cost of a full diamond interchange.